

REMARKS

Claim Objections

Claim 14 has been amended to correct the typographical error of the word "nonwoven" as indicated by the Examiner.

Claim Rejections – 35 U.S.C. §§102/103

Claims 1-6, 9-11, 13-17, and 25-30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over United States Patent No. 5,336,545 issued to Morman ("Morman").

The tear resistant laminate of the present invention, as amended, comprises an elastic film, a first and second web of consolidated heat set nonelastic thermoplastic fibers. United States Patent No. 5,336,545 (Morman) discloses a composite elastic necked-bonded material including at least one necked material joined to at least one elastic sheet. This is significantly different than the claimed invention of the subject application. The claimed invention comprises a first and second web of consolidated heat set nonelastic thermoplastic fibers. The consolidation process is specifically designed to permanently change and set the structure of the drawn nonwoven fibers. The fibers are heated to a temperature above the softening temperature but below the melting temperature while drawing the web. The machine direction stresses reorient the fibers and create sufficient compressive stresses to laterally consolidate them and reduce pore size to create a "product with unique properties". See RE 35,206 (Hassenboehler), col. 7, lines 31 to 39. After heating to a temperature between the softening temperature and the melting temperatures, the web is cooled to set the reorientation into the nonwoven web, thus forming a "consolidated heat set nonwoven web."

Figures 4 to 6 of Hassenboehler show difference between an unconsolidated web (Figure 4 and typical of Morman) and a consolidated heat set web (Figure 6 and representative of the present invention). The consolidated heat set web is drawn in the heated condition and allowed to cool to fix the web in the general form shown in Figure 6. Applicants respectfully submit that consolidated heat set nonwoven web is not a process limitation, but a structural limitation that would be understood as described in the subject application.

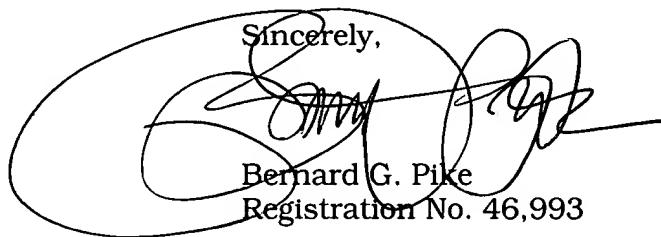
As noted by the Examiner, the necked material of Morman may be bonded to the elastic sheet by using heat and pressure. However, bonding temperature and consolidation temperatures are not the same. One skilled in the art understands that a bonding temperature is lower than the consolidation temperature and lower than the softening temperature. As evidence, the temperature of bonding of the polypropylene web as used in Morman in all examples is 127°F, *see* Morman: Examples 2 and 4, for instance, while consolidation temperatures as disclosed in Hassenboehler are between 165°F and 425°F in the broadest description of the invention and preferably between 250°F and 350°F for polypropylene. The consolidated heat set material may not relax in the machine direction after consolidation because the structure, such as shown in Figure 6 of Hassenboehler, is set. The inventors found that setting the heat drawn consolidated structure reduces the stresses between the elastic sheet and the first and second nonwoven web. As stated in the Declaration of Stephen D. Bruce under 37C.F.R. 132 that laterally consolidated nonwoven webs provide for superior bonding as compared to necked nonwoven webs. This is shown clearly by Figures 1 through 4 included in the Declaration. One skilled in the art would understand that a higher integrity of bonding points would result in a higher ultimate force to break.

Further, one skilled in the art would not be motivated to combine the teachings of Morman and Hassenboehler. Hassenboehler discloses a method of reducing pore size in the nonwoven. There is no suggestion or motivation to provide a nonwoven web in with decreased pore size in the laminate of Morman. Further, Morman does not provide a tear resistant laminate due to the presence of the stressed necked material layer in the laminate. Morman teaches away from the continuation of Norman and Hassenboehler. Morman teaches that “[b]ecause the neckable material 12 is able to stretch and return to its necked dimension in directions such as, for example the machine direction or the cross-machine direction.” See Morman col. 9, lines 25-53. This is different than the consolidated heat set nonwoven web of the present invention.

Support for the amendment can be found in the specification of Re. 35,206, which is incorporate by reference into the present application, in column 9, lines 43-45, for example.

CONCLUSIONS

Applicants believe that they have fully addressed each basis for the rejection in the Office Action. Reconsideration of the claims of the subject application and issuance of a Notice of Allowability is respectfully requested. Should the Examiner have any remaining concerns, she is requested to contact the undersigned at the telephone number given below so that the concerns may be resolved with issuance of an additional Office Action.

Sincerely,

Bernard G. Pike
Registration No. 46,993

Troutman Sanders LLP
1001 Haxall Point
Richmond, Virginia 23219
Telephone: 804-697-1243
Facsimile: 804-698-5171